

Training Guidelines for Physicians Who Evaluate and Interpret Diagnostic Ultrasound Examinations

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Physicians who evaluate and interpret diagnostic ultrasound examinations should be licensed medical practitioners who have a thorough understanding of the indication and guidelines for ultrasound examinations as well as familiarity with the basic physical principles and limitations of the technology of ultrasound imaging. They should be familiar with alternative and complementary imaging and diagnostic procedures and should be capable of correlating the results of these other procedures with the ultrasound examination findings. They should have an understanding of ultrasound technology and instrumentation, ultrasound power output, equipment calibration, and safety. Physicians responsible for ultrasound examinations should be able to demonstrate familiarity with the anatomy, physiology and pathophysiology of those organs or anatomic areas that are being examined. These physicians should provide evidence of training and requisite competence needed to successfully perform and interpret diagnostic ultrasound examinations in the area(s) they practice. The training should include methods of documentation and reporting of ultrasound studies. Physicians performing diagnostic ultrasound examinations should meet at least 1 of the following:

1. Completion of an approved residency program, fellowship, or postgraduate training that includes the equivalent of at least 3 months of diagnostic ultrasound training in the area(s) they practice, under the supervision of a qualified physician(s)*, during which the trainees will have evidence of being involved with the performance, evaluation, and interpretation of at least 300** sonograms.
2. Certification in breast ultrasound by the American Society of Breast Surgeons is accepted as proof of sufficient training in breast ultrasound.
3. Successful completion of the Endocrine Certification in Neck Ultrasound (ECNU) Program by the American Association of Clinical Endocrinologists (AACE) is accepted as proof of sufficient training in thyroid/parathyroid ultrasound.
4. Completion of training in "Focused Assessment with Sonography for Trauma (FAST)" as recommended by the American College of Emergency Physicians (ACEP) is accepted as proof of sufficient training for the performance of the FAST Examination.
5. Demonstration of at least 1 of the criteria listed in the AIUM's official statement "Training Guidelines for the Performance of the Musculoskeletal Ultrasound Examination" is accepted as proof of sufficient training in musculoskeletal ultrasound.
6. Proof of completion of an ABOG or ACOOG approved fellowship in Maternal - Fetal Medicine, with a brief written description of experience in performance of fetal echocardiography including both normal and abnormal cases is accepted as proof of sufficient training in fetal echocardiography. Physicians must be Active Candidates or Diplomates of ABOG or ACOOG. Others, including Pediatric Cardiologists and Radiologists, who have not completed formal MFM fellowship but who can demonstrate education and skills in performing fetal echocardiography should submit documentation of their educational and clinical experience.
7. In the absence of formal fellowship or postgraduate training or residency training, documentation of clinical experience could be acceptable providing the following could be demonstrated:
 - a. Evidence of 100 AMA PRA Category 1 Credits™ dedicated to diagnostic ultrasound in the area(s) the physicians practice, and,
 - b. Evidence of being involved with the performance, evaluation and interpretation of the images of at least 300** sonograms within a 3-year period. It is expected that in most circumstances, examinations will be under the supervision of a qualified physician(s)*. These sonograms should be in the specialty area(s) in which the physicians are practicing.

* A qualified physician is one who, at minimum, meets the criteria defined above in this document.

** Three hundred cases were selected as a minimum number needed to gain experience and

proficiency with sonography as a diagnostic modality. This is necessary to develop technical skills, to appreciate the practical applications of basic physics as it affects image quality and artifact formation, and to acquire an experience base for understanding the range of normal and recognizing deviations from normal.

The number of required cases will be greater for physicians utilizing ultrasound for multiple subspecialty applications or anatomic areas (at least 500 cases). It is recognized, however, that the experience gained in the initial 300 cases provides an important foundation of knowledge and skill, which may reduce the number of additional cases needed to master other diagnostic ultrasound uses.

Cases presented as preselected, limited image sets-such as in lectures, case conferences and teaching files are excluded. The ability to analyze a full image set, determining its completeness and the adequacy of image quality, and performing the diagnostic process, distinguishing normal from abnormal, is considered a primary goal of the training experience.